

Biodiversity
A Delicate Balance
Field Program
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- Grade:** Fifth
- Subject:** Biodiversity at Red Rock Canyon
- Theme:** Biodiversity simply means the variety of living things, ALL living things no matter how big or small. Biodiversity acts as an indicator for the health of our planet. It may even provide for future needs.
- Goal:** Students will gain an appreciation for the aesthetic, ecological, scientific, political, economic, recreational, and intrinsic value of biodiversity of the Mojave Desert.
- Curriculum:** Life Science (5) 2.2 Observe ecosystems and investigate and describe interrelationships and interdependence between living things and their environment.
- Objectives:** **Students will be able to:**
Describe biodiversity and the importance of preserving biodiversity
Define the terms threatened, endangered and extinct
List two reasons for the decline of biodiversity in Nevada
Describe how the terms preserve, conserve and development effect threatened and endangered species in Nevada.
- Background:** Biodiversity is influenced by climate, elevation, and soil composition. Through a combination of these elements plants and animals grow and survive at Red Rock Canyon. Life at the Canyon adapts to different environments and develops mechanisms for surviving. Each habitat at Red Rock Canyon is home to a different assortment of living things. Destructive activities, whether natural or human affect all species. Sometimes the problems created cause species to become either threatened or endangered. Scientists study biodiversity using different methods including the use of transects.

Vocabulary:

Habitat - a place where a plant or animal lives.

Ecosystem - The interaction of the biological community (all living things) and the physical environment (water, air, minerals).

Biodiversity - all living things.

Endangered Species - a species of plant or animal in danger of extinction.

Extinct - a species that has vanished from existence-not a single one left.

Native Species - A plant or animal that evolved or was transported to an area through natural means. Not introduced by man.

Exotic/Nonnative Species - not native, something that did not exist in the area before humans brought it from another place.

Threatened Species – A plant or animal whose numbers are declining.

Pre-Site Activity

Review the Nevada's Sensitive Species list with the children prior to their visit to the Canyon.

Activity – Biodiversity at the Canyon

- Discuss what biodiversity means. Review quantities of plants and animals found at Red Rock. What effects diversity.

Activity - Searching for Biodiversity

- Distribute Plant Identification Booklets to groups and explore the gardens around the Visitor Center.

Activity - Become a Wildlife Biologist

- Lay out the transects and have the children examine their assigned area for the number of different plant species / animal signs they find. Have them complete the *Plant Biodiversity Data Sheet*. Discuss the findings – do they recognize any of the plants from the exploration of the gardens around the Visitor Center?

Activity – Tortoise Habitat

- Visit the tortoises and discuss their lifestyle and the concerns they face as a threatened species.

Conclusion: Summarize the diversity of the canyon – including plants and animal. Discuss the importance of protecting this area, as it is so close to an urban developed area.